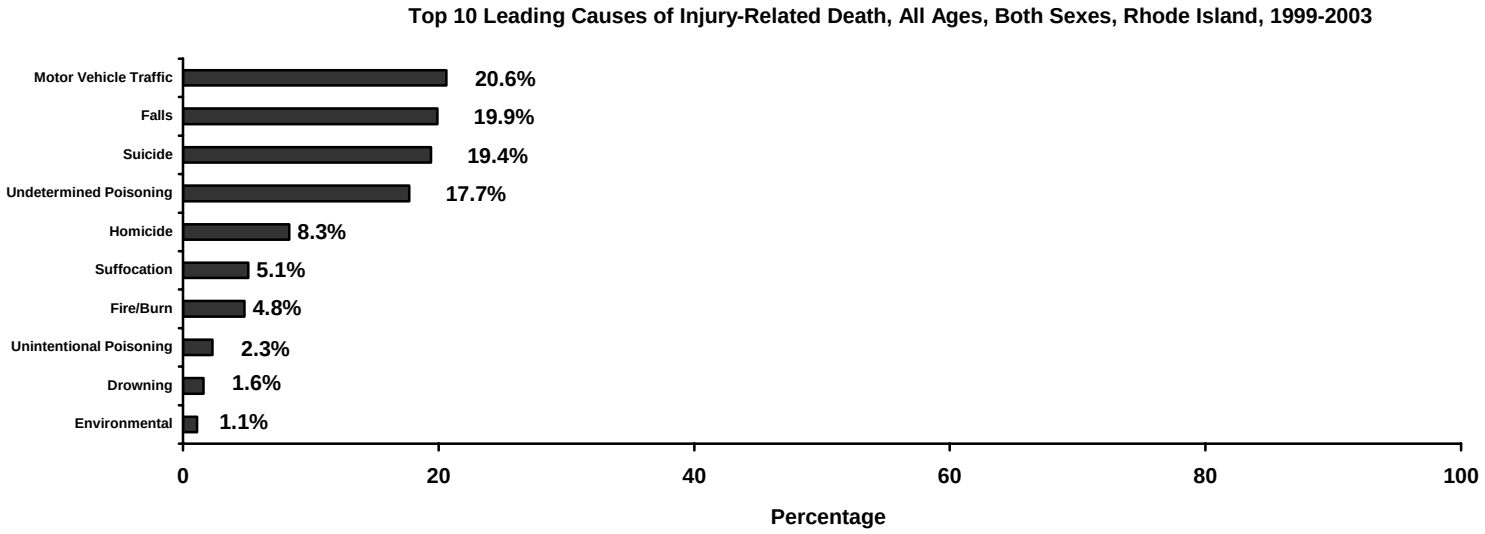
THE BURDEN OF INJURY IN RHODE ISLAND
EXECUTIVE SUMMARY:

Fatal Injuries in Rhode Island:
Unintentional injury is the leading cause of death for all Rhode Islanders between the ages of 1 and 34 (figure 1). When suicide, homicide, and unintentional injuries are combined, injury becomes the 5th leading cause of death for Rhode Islanders of all ages.[2] Only heart disease, cancer, cerebrovascular disease, and chronic lower respiratory disease kill more Rhode Island residents yearly. Individuals between the ages of 1-34 are disproportionately affected by deaths from both intentional injury (homicide and suicide) and unintentional injury (e.g. motor vehicle crashes). For this age group, injuries account for two out of three deaths.[2] Between 1999 and 2003, 2,479 fatal injuries occurred in Rhode Island, an average of 496 per year. The cost to the state of these deaths is staggering – $1.3 billion in health care and social support resources.[3] The estimated cost per case was $1.8 million.[3] This breaks down as follows: costs of medical care $11.5 thousand; costs of lost productivity $964.7 thousand; and costs of decreased quality of life $807.5 thousand.[3] These fiscal estimates do not include the emotional burden to the survivors.

Figure 1: **Leading Causes of Injury-related Death**

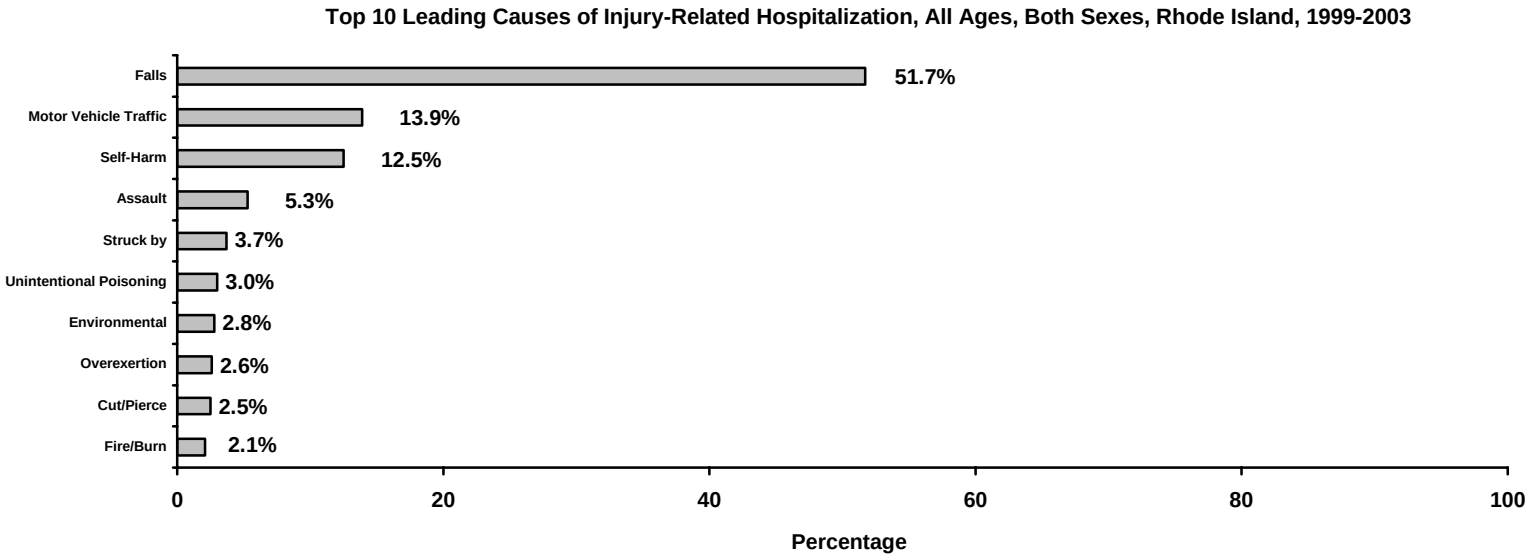
	Age Groups											
Rank	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Short Gestation	Unintentional Injury	Malignant Neoplasms	Unintentional Injury	Unintentional Injury	Unintentional Injury	Unintentional Injury	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Heart Disease	Heart Disease
2	Congenital Anomalies	Congenital Anomalies	Unintentional Injury	Malignant Neoplasms	Homicide	Suicide	Suicide	Heart Disease	Heart Disease	Heart Disease	Malignant Neoplasms	Malignant Neoplasms
3	Placenta Cord Membranes	Malignant Neoplasms	Homicide	Homicide	Suicide	Homicide	Malignant Neoplasms	Unintentional Injury	Unintentional Injury	Chronic Low. Respiratory Disease	Cerebro-vascular	Cerebro-vascular
4	Maternal Pregnancy Comp.	Heart Disease	Septicemia	Suicide	Malignant Neoplasms	Malignant Neoplasms	Homicide	Suicide	Liver Disease	Diabetes Mellitus	Chronic Low. Respiratory Disease	Chronic Low. Respiratory Disease
5	SIDS	Cerebro-vascular	Chronic Lower Respiratory Disease	Influenza & Pneumonia	Congenital Anomalies	Heart Disease	Heart Disease	Liver Disease	Suicide	Liver Disease	Influenza & Pneumonia	Influenza & Pneumonia
6	Bacterial Sepsis	Homicide	Congenital Anomalies	Benign Neoplasms	Heart Disease	Congenital Anomalies	HIV	HIV	Diabetes Mellitus	Cerebro-vascular	Alzheimer's Disease	Unintentional Injury
7	Circulatory System Disease	Benign Neoplasms	Five Tied	Congenital Anomalies	Meningo-coccal Infection	Cerebro-vascular	Cerebro-Vascular	Cerebro-Vascular	Chronic Low. Respiratory Disease	Unintentional Injury	Diabetes Mellitus	Diabetes Mellitus

For this analysis, injury was collapsed into the following discrete categories: Suicide, homicide, and unintentional injury (by mechanism). Overall, unintentional motor vehicle crashes (MVC) are the leading cause of injury death for Rhode Islanders from 1999-2003, accounting for just over 20% of the ten leading causes of injury fatality (figure 2). Unintentional falls are the second leading, followed by suicide, undetermined poisonings, and homicide (figure 2). The top 3 leading causes of injury-related death combined account for almost six out of ten deaths due to injury in the state.[4]



Leading Causes of Injury-related Hospitalization:
Each year, more than 5,000 Rhode Islanders are hospitalized due to injury.[5] For individuals under age 40, injuries are the leading cause of hospitalization.[5] Unintentional falls are the leading cause of injury-related hospital admissions in the state. More than half of the injury hospitalizations result from falls. Falls are the leading cause of injury hospitalization for both sexes, all racial groups (included in this analysis), and for Rhode Islanders under 15 and over 44 (Tables 4,5,6).[5] The overwhelming majority of fall-related hospitalizations occur among elder females. Among individuals over 65, females account for 77% of all fall injury hospitalizations in Rhode Island.

For Rhode Island youth, there is a different pattern. Motor vehicle traffic accidents are the leading cause of injury hospitalization between the ages of 15 and 24, and self-harm is the second leading cause. Rhode Island's rate of self-harm hospitalization peaks among youth aged 15 to 19.



Risk Factors Associated with the 3 Leading causes of Injury:
Alcohol impairment substantially increases the risk of a traffic-related injury. In 2003, Rhode Island had the highest proportion of alcohol-related fatal motor vehicle crashes (MVC) in the country.[6] Half of all motor vehicle occupants involved in a fatal MVC in Rhode Island had Blood Alcohol Content (BAC) above the legal limit of .08 units or higher, compared to a third of motor vehicle occupants nationally.[6]

High speed has also been shown to increase the risk for MVC injuries. Compared to the United States as a whole, Rhode Island also has a higher percentage of speed-related fatal accidents, defined as driving over the legal limit, (US 31% vs. RI 52%). [6] While the proportion of speed-related crashes is high in Rhode Island, note that RI's speed limits are generally lower than those of other states' given our high population density, and predominately urban roads.

Roughly a quarter of elders who sustain a fall-related injury do not survive. Of survivors, another quarter die within the year following their fall.[8] Hip fractures are the fall-related injury causing the greatest number of deaths and long term care admissions.[7] Women are particularly susceptible, experiencing 80% of all hip fractures.[7] It is estimated that nearly 20% of Rhode Island females over 50 have osteoporosis, substantially increasing their risk of sustaining fall injuries.[9]

Suicide is the leading cause of intentional injury death in Rhode Island. There are more than twice as many suicides compared to homicides in RI. Unlike national suicide rates which peak among the elderly, Rhode Island suicide rates peak among individuals between 35 and 54. In the state, males account for almost 80% of all suicide in the state and have a suicide rate more than double that of females.[4] Of particular concern is the fact that Non-Hispanic Blacks in Rhode Island have suicide rate 30% higher than the national rate. Suffocation (usually hanging) is the most common method of suicide (38%), followed by firearms (30%), and poisoning (21%). In contrast to national statistics, Rhode Island has a much lower proportion of suicide by firearm (US 56%) and a much higher proportion of suicide by suffocation (US 20%).[2,4]

The full text of The Burden of Injury in Rhode Island can be viewed at:

Http://www.health.ri.gov/disease/saferi/index.php

References:

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4. Rhode Island Vital Statistics Data, 1999-2003; Office of Vital Statistics / Center for Health Data and Analysis, Rhode Island Department of Health.

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6. National Highway Transportation Safety Association, State Traffic Safety Information [online], (2003) {cited: June 2005}. Available from: http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncs/
7. National Center for Injury Prevention and Control Fact Sheets: Falls and Hip Fractures among Older Adults {cited: May 2005}. Available from: htpp://www.cdc.gov.ncipc/factsheets/falls.htm

8. America's Bone Health: The State of Osteoporosis and Low Bone Mass in Our Nation; National Osteoporosis Foundation, 2002.

9. National Health And Nutrition Examination Survey, 2002; data from the National Osteoporosis Foundation and the Rhode Island Department of Health Osteoporosis Program.